

### **Remarks**

Claims 1-12 and 14-18 are amended herein. Support for the amendment of claims 1-5 can be found throughout the specification, such as on page 7, line 17 to page 9, line 4; page 22, line 8 to page 23, line 33; FIG. 1, and FIG.5. Claims 6-8 are amended to correct dependency. Claims 10-11 are amended to correct form. Claims 14-18 are amended to be in dependent form.

New claims 52-59 are added herein. Support for new claims 53 and 54 can be found in the specification found throughout the specification, such as on page 7, line 17 to page 9, line 4; page 22, line 8 to page 23, line 33; FIG. 1; and FIG.5. Support for new claim 55 can be found throughout the specification, such as on page 20, lines 10-19 and on page 21, lines 13-29. Support for new claim 56 can be found throughout the specification, specifically at page 23, lines 12-21 and page 35, line 19 to page 36, line 23. Support for new claims 57-59 can be found throughout the specification, specifically at page 17, line 23 to page 18, line 18 and on page 35, line 19 to page 36, line 23.

Claims 13 and 19-51 are canceled herein, without prejudice, in response to the restriction requirement. Applicants reserve the right to prosecute this subject matter in a divisional application.

Applicants believe that no new matter is added. Substantive examination of the application is respectfully requested.

### **Restriction Requirement**

In response to the restriction requirement, Applicants elect Group I (claims 1-8, 13-15 and 17), drawn to immunogenic compositions including a PAGE-4 protein or fragments thereof, and methods of inhibiting the growth of a malignant cell, with traverse. Applicants respectfully

request that the subject matter of Group I (polypeptides and their use to treat tumors) be rejoined with the subject matter of Group II (polynucleotides).

The present application discloses PAGE-4, immunogenic fragments thereof, nucleic acids encoding PAGE-4 and fragments thereof, and methods of use. This application is a U.S. national phase application which entered the national phase under § 371; the PCT guidelines related to unity of invention apply. These guidelines are set forth, for example, in M.P.E.P § 1850, which states that “examples concerning Unity of Invention involving biotechnological inventions may be found in Chapter 10 of the International Search and Preliminary Examination Guidelines which can be obtained from WIPO’s web site ([www.wip.int.pct/en/texts/gdlines.htm](http://www.wip.int.pct/en/texts/gdlines.htm)).

For the Examiner’s convenience, a copy of page 96 from Chapter 10 is attached as Exhibit A (see Example 39, Protein and its Encoding DNA). As disclosed in Chapter 10 of the PCT guidelines, if there is no prior art that teaches the claimed protein or nucleic acid sequence, and the claimed DNA encodes protein X (in the present application, PAGE-4), then the claims to the protein and the nucleic acid should be examined in a single application. Specifically, because the protein makes a contribution over the prior art, the protein and the DNA share a corresponding technical feature, and the claims have unity of invention (*a priori*). In the present application, because the amino acid sequence of PAGE-4 is novel and non-obvious over the prior art, there is clearly unity of invention between the PAGE-4 proteins and nucleic acid encoding these proteins.

A description of the PTO’s agreement with the PCT guidelines on Unity of Invention can be found in Special Program Examiner Julie Burke’s presentation entitled “Unity of Invention, Biotech Practice,” which is available from the U.S. Patent and Trademark Office. For the

Examiner's convenience, a copy of a slide illustrating unity of invention for disclosures including proteins and DNA is attached as Exhibit B.

Applicants note that all of the claims were examined during International prosecution. In view of the PCT guidelines, the U.S. PTO presentation, and the previous search by the European Patent Office during international prosecution, reconsideration and rejoinder of Group I with Group II is respectfully requested.

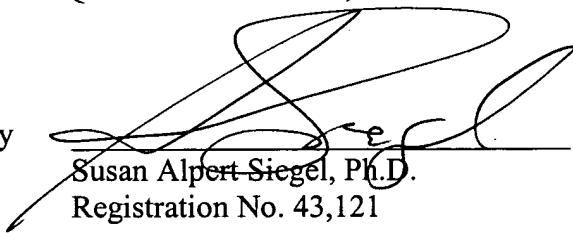
### **Conclusion**

Applicants respectfully request examination of Groups I and II. In the unlikely event that the restriction requirement is maintained, Applicants elect Group I, with traverse. If any minor matters remain to be addressed before examination, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

KLARQUIST SPARKMAN, LLP

By



Susan Alpert Siegel, Ph.D.  
Registration No. 43,121

One World Trade Center, Suite 1600  
121 S.W. Salmon Street  
Portland, Oregon 97204  
Telephone: (503) 595-5300  
Facsimile: (503) 228-9446